REMARKS

Reconsideration and allowance of the present patent application based on the foregoing amendments and following remarks are respectfully requested.

By this Amendment, claims 1, 7, 9-10 and 12-14 are amended, claims 6 and 15 are cancelled without prejudice or disclaimer to the subject matter therein, and claims 16 and 17 are newly added. Support for the amendments to claims 1, 7, 9-10 and 12-14 may be found, for example, in the embodiments shown in FIG. 3 and on page 11, lines 19-27 and page 12, lines 1-3. Support for new claims 16 and 17 may be found, for example, in the embodiment shown on pages 7-13. No new matter has been added. Accordingly, after entry of this Amendment, claims 1-5, 7-14 and 16-17 will remain pending in the patent application.

Claims 1-15 were rejected under 35 U.S.C. §103(a) based on Ellis *et al.* (U.S. Patent No. 5,954,806) (hereinafter "Ellis") in view of Tamura (U.S. Pub. No. 2002/0199073) and Sherritt *et al.* (U.S. Patent No. 6,697,895, cited as evidentiary reference) (hereinafter "Sherritt"). The rejection is respectfully traversed.

Claims 6 and 15 are cancelled without prejudice or disclaimer to the subject matter therein, thus rendering moot the rejection of these claims.

Claim 1 recites a disk drive comprising, *inter alia*, a control unit configured to, in accordance with a copying operation instructed by the command unit, perform the copying operation, the control unit transferring a write command for allowing the reproduced data to be written into a recording medium in the copying destination drive and the reproduced data to the copying destination drive through the interface unit.

As conceded by the Examiner on page 3, lines 6-7, Ellis fails to disclose, teach or suggest a control unit configured to, in accordance with a copying operation instructed by the command unit, perform the copying operation. However, Applicant respectfully submits that there are additional features that are absent in Ellis. For example, Ellis does not disclose, teach or suggest a command unit configured to instruct a copying operation for allowing the data which is reproduced by the read channel to be transferred to a copying destination drive and a control unit that transfers a write command for allowing the reproduced data to be written into a recording medium in the copying destination drive and the reproduced data to the copying destination drive through the interface unit.

Ellis merely discloses in FIG. 3 a hard disk computer peripheral device comprising a controller 360, a buffer memory 370, a microprocessor 380, a hard disk 391, and a hard disk servo 392. (*See* col. 4, lines 12-32). Controller 360 includes functional blocks such as SCSI

interface portion 361, DMA engine 362, buffer manager 363, and disk controller 364. *Id.* Controller 360 includes interfaces to buffer memory 370, microprocessor 380, a read/write interface to hard disk 391, and hard disk servo 392. *Id.* Microprocessor interface 382 is connected to and controls the functional blocks depicted as SCSI interface 361, DMA engine 362, buffer manager 363, and disk controller 364. *Id.*

The Examiner identified the Digital Memory Access/Addressing engine (DMA) as being the command unit of claim 1. Applicant respectfully disagrees and notes that the DMA engine is merely used to transfer data from one memory area to another without having to go through the central processing unit. (*See* Exhibit 1 describing how the DMA transfer works). As pointed out in Exhibit 1, the DMA process merely uses a DMA channel for the data transfer. The DMA engine does not instruct a copying operation. The DMA engine is merely instructed to transfer data from one memory area to another. Applicant respectfully submits that Ellis is silent as to a disk drive comprising a command unit as in claim 1.

Furthermore, Ellis is silent as to a control unit that transfers a write command for allowing the reproduced data to be written into a recording medium in the copying destination drive and the reproduced data to the copying destination drive through the interface unit.

Tamura fails to remedy the deficiencies of Ellis. Tamura discloses a system and code for backing up information on a storage system. (*See* paragraph [0008]). Specifically, Tamura discloses that a server sends an E-copy command to a copy manager on a disk system and that the copy manager finds an available back-up device and then backs-up the information indicated in the E-copy command to the back-up device. *Id.*

However, unlike claim 1, Tamura fails to disclose, teach or suggest a command unit configured to instruct a copying operation for allowing the data which is reproduced by the read channel to be transferred to a copying destination drive and a control unit that transfers a write command for allowing the reproduced data to be written into a recording medium in the copying destination drive and the reproduced data to the copying destination drive through the interface unit. In Tamura, the server 210 is configured to send an E-copy command. The disk system 220 is not configured to instruct a copying operation or to transfer a write command as in claim 1.

According to the present invention, upon receiving the instruction to perform copying, the disk drive only sends a normal write command and data to the copying destination drive. The copying destination drive only executes a normal write operation based on the received write command. As a result, a copying operation is carried out in accordance with the

copying source drive. A particular copy command such as the E-Copy command of Tamura et al. is unnecessary in the present invention. Therefore, Applicant respectfully submits that any reasonable combination of Ellis and Tamura cannot result, in any way, in the invention of claim 1.

Furthermore, it is noted that a particular copy command such as the E-Copy command of Tamura is unnecessary in the present invention. An instruction to perform copying can be issued using only a switch in the disk drive of the present invention. A complicated software such as the copy manager of Tamura et al. is unnecessary in the disk drive of the present invention.

Applicant also respectfully submits that Sherritt, which is cited as an evidentiary reference, does not remedy the deficiencies of Ellis and Tamura. Sherritt merely relates to a computer system and to the communication of information between a host computer and a remotely located tape storage device. Sherritt is, however, silent as to a disk drive including the features of claim 1.

Claims 2-5 and 7-9 are patentable over Ellis, Tamura, Scherritt and a combination thereof at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Claim 10 is patentable over Ellis, Tamura and a combination thereof for at least similar reasons as provided in claim 1 and for the additional features recited therein. Namely, claim 10 is patentable over Ellis, Tamura and a combination thereof at least because this claim recites a method of transferring data read from a disk medium to a copying destination drive in a disk drive, the method comprising, *inter alia*, transferring data which is read out from the disk medium and a write command for allowing the data to be written into a recording medium to the copying destination drive when a communication link is established to the copying destination drive. As mentioned previously, these features are not suggested or taught by Ellis, Tamura and Sherritt. Therefore, any reasonable combination of Ellis, Tamura and Sherritt cannot result, in any way, in the invention of claim 10.

Claims 11-14 are patentable over Ellis, Tamura, Scherritt and a combination thereof at least by virtue of their dependency from claim 10 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-5 and 7-14 under 35 U.S.C. §103(a) based on Ellis in view of Tamura and Sherritt are respectfully requested.

New claim 16 defines additional subject matter that is novel and non-obvious over the art of record. Applicant respectfully submits that new claim 16 is in condition for allowance.

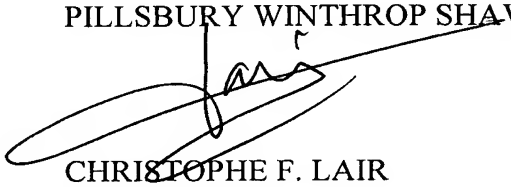
The objections and rejections having been addressed, Applicant respectfully submits that the application is in condition for allowance, and a notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



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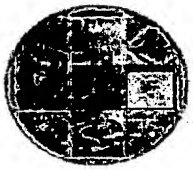

Glossary of Terms

If you can't find what you want here,
try Atomica, or Google.
Last update: 6/13/2001

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

Term	Definition
Active Interconnect	Xilinx Active Interconnect technology is built on the strength of the fourth-generation segmented routing technology. It provides full buffering at each routir interconnect point. This eliminates the variable routing delay effects of conventional interconnect architectures, where the total routing delay depends o the fan-out. With the conventional interconnect architecture, the routing delay of particular node may be changed during design iteration, which makes complex designs like the ten million-system gates design impractical. In contrast, Active Interconnect technology allows precise delay calculations that are generally independent of signal fan-out. For complex IP-based designs, Active Interconnec technology allows predictable inter-IP routing delays to facilitate easy integration multiple complex IP blocks.
ADC	Analog-to-Digital-Converter
AGP	Accelerated Graphics Port. An interface specification from Intel that enables 3-D graphics to display quickly on personal computers. AGP is based on PCI, but is designed especially for the high throughput requirements of 3-D graphics. Rathe than using the PCI bus for graphics data, AGP introduces a dedicated point-to-point channel so that the graphics controller can directly access main memory
aliasing	In audio sampling, a distortion-producing reflection caused by the fact that all frequency components higher than half the sampling frequency are reflected in tl lower range. Aliasing creates artifacts. It can be avoided by processing the waveform to be sampled with a low-pass filter at half the sample rate before digitizing.
AMPS	1. Advanced Mobile Phone Service (analog). 2. Analog Mobile Phone System. Non-digital cellular mobile phones.
anti-aliasing	In audio applications, the smoothing of steps between discrete samples to reduc the undesirable effects of low bit-rate capture.
artifact	(n.) Evidence of undesirable distortion that appears in digitized audio or video file as a result of inaccurate information introduced during capture or compression. Artifacts may take the form of new, unwanted data or the degradation of existing content.
ASIC	Application Specific Integrated Circuit
ASSP	Application Specific Standard Part

DCM Digital Clock Manager

DDR Double Data Rate (in reference to RAM and registers)

Decimate To discard portions of a signal in order to reduce the amount of information to be encoded or compressed. Lossy compression algorithms ordinarily decimate whil subsampling.

DECT Digital Enhanced Cordless Telecommunications: A standard developed by the European Telecommunication Standard Institute from 1988, governing pan-European digital mobile telephony. DECT covers wireless PBXs, telepoint, residential cordless telephones, wireless access to the public switched telephone network, Closed User Groups (CUGs), Local Area Networks, and wireless local loop. The DECT Common Interface radio standard is a multicarrier time division multiple access, time division duplex (MC-TDMA-TDD) radio transmission technique using ten radio frequency channels from 1880 to 1930 MHz, each divided into 24 time slots of 10ms, and twelve full-duplex accesses per carrier, fo a total of 120 possible combinations. A DECT base station (an RFP, Radio Fixed Part) can transmit all 12 possible accesses (time slots) simultaneously by using different frequencies or using only one frequency. All signaling information is transmitted from the RFP within a multiframe (16 frames). Voice signals are digitally encoded into a 32 kbit/s signal using Adaptive Differential Pulse Code Modulation.

DES Data Encryption Standard

DFS Digital Frequency Synthesizer

DLL Delay-Locked Loop (aka digital delay-locked loops)
Dynamic Link Library

DMA Direct Memory Access/Addressing. DMA is a method of transferring data from or memory area to another without having to go through the central processing unit Computers with DMA channels can transfer data to and from devices much more quickly than those in which the data path goes through the computer's main processor.

DPS Digital Phase Shifter

DRAM Dynamic Random Access Memory

DSP 1.Digital Signal Processing. Using computers to process signals such as sound, video, and other analog signals which have been converted to digital form. Some uses of DSP are to decode modulated signals from modems, to process sound, video, and images in various ways, and to understand data from sonar, radar, ar seismological readings.

2.Digital Signal Processor. A specialized CPU used for digital signal processing. Some uses of digital signal processors are with modems and sound boards.

DSS digital spread spectrum (cordless phone technology)

DVR Digital Video Recorder/Recording. Also, Driver

EDA Electronic Design Automation. Application Software tools for the development of integrated circuits and systems.

EDIF Electronic Design Interchange Format

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fabric The arrangement and physical relationship of components or constituent elemen of something.

FAE field application engineers

Fan-in A board or other device that gathers signals from a variety of devices and consolidates them for processing (as with an MADC).

Fan-out A board or other device which receives a signal, replicates it, and sends it out to